Mathematics Toolkit: Grade 8 Objective 5.A.1.b

Standard 5.0 Knowledge of Probability

Topic A. Sample Space

Indicator 1. Identify a sample space

Objective b. Determine the number of outcomes

Assessment Limits:

Use no more than 5 dependent events with no more than 10 outcomes in the first event

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Objective 5.A.1.b Tools

Sample Item #1 - Selected Response (SR) Item

Mathematics Grade 8 Objective 5.A.1.b

George has a bag of marbles. Inside the bag are 5 red marbles, 3 green marbles, and 2 blue marbles. He draws out two marbles in a row, without replacement. What is the number of outcomes?

      A. 10
      B. 20
      C. 90
      D. 100

Correct Answer:
C

Sample Item #2 - Selected Response (SR) Item

Mathematics Grade 8 Objective 5.A.1.b

At Maryland Middle School, there are 9 mathematics classes. If two mathematics classes are selected for a school competition, what is the number of possible outcomes?

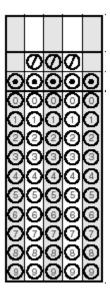   A. 8
    B. 9
    C. 72
    D. 81

Correct Answer:
C

Answer Annotation

    A. 8 (number of classes minus one)

    B. 9 (number of classes)

    C. 72 (correct answer)

    D. 81 (number of classes squared)

Sample Item #3 - Student Produced Response (SPR) Item

Mathematics Grade 8 Objective 5.A.1.b

There are 12 CD's in a bag — 6 rap music, 3 country music, and 3 rock music. Two CD's are selected from the bag. The first CD is not replaced before making the second selection. What is the total number of possible outcomes?

Correct Answer:
132

Answer Annotation

Answer: or